

## **Temperature variation of flexible and rigid pavements in Eastern Saudi Arabia**

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**Abstract:** Temperature is one of the most important factors affecting the design and performance of both rigid and flexible pavements. This importance calls for special attention and interest in research to develop procedures for design and analysis that account for temperature considerations. Two field experiments were carried out for the monitoring of temperature variations of asphalt concrete and Portland cement concrete pavements at King Fahd University of Petroleum and Minerals (KFUPM) in Dhahran, Eastern Province of Saudi Arabia. A temperature data base was developed and used to generate regression models for predicting temperatures inflexible pavements, and temperature differentials in rigid pavements, from measured air temperatures. These models are essential for pavement design and analysis. Â© 1997 Elsevier Science Ltd.